UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,449	07/18/2003	Nobuo Matsui	240541US2DIV	1115

22850	7590	03/29/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
ROSSOSHEK, YELENA

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/621,449	MATSUI ET AL.
	Examiner	Art Unit	
	Helen Rossoshek	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 July 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-11_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-11_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _18 July 2003_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☒ Certified copies of the priority documents have been received in Application No. _09/865,289_.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _07/18/2003_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the Application 10/621,449 filed 07/18/2003.

2. Claims 1-11 are pending in the Application.

Drawings

3. Figure 19 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated.   See MPEP § 608.02(g).   Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because Figures 1, 6, 8, and 10 have some contradiction with a Specification, such as Block 3 of the Figures 1, 6, 8, and 10 has a difference of naming it on the Figures and describing it in the Specification (e.g. Page 6 line 21). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

Page 1 a status of the Application Serial No. 09/865,289 has to be updated.

Page 2 line 14 after "b" insert —e—

Page 2 line 16 after "configurable" insert —e—

Page 4 line 2 after "chang" insert —e--

Page 8 line 20 after "user" delete "specify" insert –specifies--

Appropriate correction is required.

Claim Objections

6. Claims 1, 2, 6 and 7 are objected to because of the following informalities:

claims 1 and 6: there is insufficient antecedent basis for second limitation in the claims.

claims 2 line 2 after "include" insert –s—

claim 7 line 2 after "include" insert –s—

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Steps of the claims 1 and 6 regarding "selecting ..." are formulated unclear: where selecting is from?

9. Claims 4 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: it is not clear what relationships between RTL template and system LSI are.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Berekovic et al. ("A core generator for fully synthesizable and highly parameterizable RISC-cores for system-on-chip designs", Signal Processing Systems, 1998, Pages: 561-568).

With respect to claims 1 and 6 Berekovic et al. teaches a processor as shown on the Fig. 1 which demonstrates a multi-cycle processor core (abstract), a system LSI (abstract) comprising a processor core shown on the Fig. 1; and memory operatively coupled to the processor within connecting the processor shown on the Figure 1 with Inst RAM and Data RAM; wherein the processor is designed using a method comprising: selecting a cache size; selecting an instruction memory size; selecting a data memory size; selecting at least one of a plurality of option instructions to be implemented within the processor by developing a soft core generator for highly parameterizable RISC-cores having an option of the of choosing the instruction word width along with parameters being able configured (abstract), wherein the soft-cores processors have high flexibility to be configured with arbitrarily chosen parameters by user, such as selecting cache size, selecting a data memory etc. as a fact of inheriting the configuration specifics from the ability of the configuration process of the processors (Pages 562, 563); it has to be noticed that claim 1 being construed as a product-by-process claim.

With respect to claims 2-5 and 7-9 Berekovic et al. teaches:

claims 2 and 7: the option instructions includes a dividing option instruction (DIV) and a maximum/minimum value option instruction (Page 565);

claims 3 and 8: the processor core is provided with an instructions cache and a data cache as shown on the Fig. 1 with separate instruction RAM (cache) and data RAM (cache) wherein the cache is form of memory in a computer which has a faster

access time than most of main memory, and is usually used to store the most frequently

accessed data main memory during execution of a program;

claims 4 and 9: the cache size, the option instructions are provided in RTL

template within resulting processor cores generated in RTL-HDL (abstract, Page 568);

claim 5: the method further comprises selecting optional hardware associated

with the processor within core generator having ability to be used for building block for

future system-level synthesis (Conclusion, Page 568).

With respect to claims 10 and 11 Berekovic et al. teaches a method of generating

a design of a system LSI using a description language (Title), comprising: preparing a

configuration specifying a file including variable item definition information as shown on

the Figure 4 wherein the design flow of core processors is depicted and a configuration

file is read by a Perl script and flexibility of such method to make changes in the design

allows by modifying the instruction set as desired by the designer and using alternative

templates files (Page 566); logically composing the design based on the description

language model by designing processor cores which are generated in RTL-HDL

(Abstract), wherein the variable item definition information contains at least one of

option instruction information and information concerning a user defined module and a

multiprocessor configuration within flexibility of the design the instruction set can be

modified by using all necessary modules as well as the top-level file of the core

which are fully synthesizable, wherein an additional instructions can easily added (Page

566); the description language comprises a hardware description language (HDL)
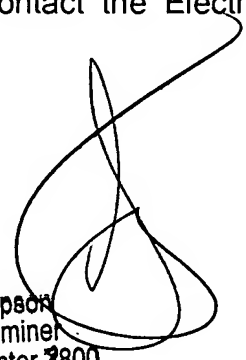
(Abstract; Page 563).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Rossoshek whose telephone number is 571-272-1905. The examiner can normally be reached on 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Helen Rossoshek
AU 2825

A. M. Thompson
Primary Examiner
Technology Center 2800